



INTRODUCTION TO ABSTRACT MATHEMATICS  
FALL 2013

ASSIGNMENT 4.3  
DUE SEPTEMBER 27

**Exercise 1.** What amounts of money can be formed using only \$2 and \$5 bills? Be sure to prove your answer is correct!

**Exercise 2.** Consider an instance of the stable marriage problem in which there exists a man  $m$  and a woman  $w$  such that  $m$  is ranked first by  $w$ , and  $w$  is ranked first by  $m$ . Prove that every stable set of marriages in this instance contains the couple  $mw$ .